Analysis of ODF Document Schema Transformations

Zsolt Lengyel and Sándor Sike

Open Document Format (ODF) is an office document format used by several desktop office suites. Our project focuses on providing support of editing ODF-based documents on mobile devices. The limited capacity of mobile devices compared to desktop computers requires that documents should be simplified to be able to handle on mobile devices.

The basis of document simplification is the transformation of the original ODF document schema. The new schema defines the needed restrictions on the documents to be used on mobile devices. The schema transformation has to be properly specified and the resulting schema has to be checked against the specification. The grammar defined by the original ODF document schema is too large and complex to be handled manually, and so are the transformed schemata, therefore automatic tool and method is necessary for specification and verification. Schema transformations can be composed by particular sequences of schema transformation primitives. The specification of these primitives is relatively simple and their effect can also be described.

We introduce a formal model to express the method of schema transformations in a comprehensive way and for verification the properties of the resulting schema.

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References

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